

Notice of Allowability

Application No.

10/701,073

Examiner

Brian R. Peugh

Applicant(s)

YOSHIOKA ET AL.

Art Unit

2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the communication of 5/3/06.
2. ☒ The allowed claim(s) is/are 4,6,11 and 19-21.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Drawings

The drawings were received on May 3, 2006. These drawings are approved by the Examiner.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: The prior art teaches related wear-leveling systems but fails to teach the combination including the limitation of:

(Claim 4) "...an access frequency index updating unit operable to add the first value to the access frequency index of a logical page that is mapped according to the mapping information to each physical page retaining original data of cache data stored in the cache storage unit, and to add the second value to the access frequency index of a logical page that is mapped according to the mapping information to each physical page to which modified cache data has been written back";

(Claim 6) "...an access frequency index updating unit operable to compare, for each piece of cache data, (i) the access frequency index of a logical page that is mapped according to the mapping information to a physical page retaining original data of a corresponding piece of cache data and (ii) the cache access frequency index of the corresponding piece of cache data, and to update the access frequency index with the cache access frequency index if the cache access frequency index is greater than the access frequency index";

(Claim 20) "...an access frequency index updating step of adding the first value to the access frequency index of a logical page that is mapped according to the mapping information to each physical page retaining original data of cache data stored in the cache storage unit, and adding the second value to the access frequency index of a logical page that is mapped according to the mapping information to each physical page to which modified cache data has been written back";

(Claim 21) "...an access frequency index updating step of comparing, for each piece of cache data, (i) an access frequency index of a logical page that is mapped according to the mapping information to a physical page retaining original data of a corresponding piece of cache data and (ii) a cache access frequency index of the corresponding piece of cache data, and updating the access frequency index with the cache access frequency index if the cache access frequency index is greater than the access frequency index".

Claims 11 and 19 are allowed as being dependent upon, and thus incorporating therein, the allowable subject matter of the respective parent claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

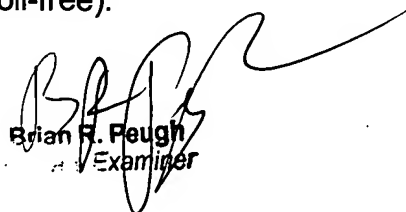
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian R. Peugh whose telephone number is (571) 272-4199. The examiner can normally be reached on Monday-Thursday from 7:00am to 4:30pm. The examiner can also be reached on alternate Friday's from 7:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks, can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Brian R. Peugh
Examiner

June 9, 2006